for large drops and bubbles. On account of the marked divergence in the results obtained by Quincke as compared with the older measurements, the speaker was led to subject Quincke's method to a detailed examination. He found that the determination of the height of the drop is exact, but that the measurement of its width by means of the micrometer is too uncertain. Instead of this method, he therefore employed the reflection of a flame from the side of the drop in order to determine the convexity of the same, and using Poisson's method of calculating the results instead of that of Quincke, he obtained as the value of the capillary constant, not 54 as given by Quincke, but 44·5, thus agreeing with the older determinations. The mercury was purified and examined by Quincke's method. In addition Dr. Sieg has determined the capillary constants for water, alcohol, oils, and a series of salt-solutions of varying concentrations. One result may be mentioned as shown by these experiments, that the capillary constant of mercury sinks to forty-two when the mercury has stood for some time, and that the same fall is observed if the mercury is put to earth; the constant is also altered if the drop is electrified or is impure. With salt-solutions the constants were dependent upon both composition and concentration. Water was also found to be very sensitive to the presence of any impurities, and while the solution of salts in water was not found to alter its capillary constants, the solution of gases produced a very appreciable alteration

Physiological Society, November 18.—Prof. du Bois Reymond, President, in the chair.—After the statutory election of the Council, Dr. Benda demonstrated a malformation as occurring in a three-months' embryo, in which two strongly marked prominences on the lower portion of the forehead gave to its countenance a curiously contemplative appearance.—Prof. Kossel next spoke on adenin. The most recent researches on the importance of the nucleus to the life of the cell, especially the knowledge that when unicellular organisms are artificially cut into pieces only those parts exhibit a complete regeneration which contain a portion of the nucleus, and the importance of the nucleus in impregnation have given an increased importance to the chemistry of the nucleus. Among the chemical substances which compose the nucleus, adenin, which has recently been discovered by the speaker, appears to possess a special importance, since, on account of its composition, $C_5H_5N_5$, it belongs to the cyanic group of bodies. This substance was obtained from tea-leaves in large quantities, and from it a series of compounds were obtained, which were exhibited as extremely fine preparations; namely, the salts with hydrochloric, sulphuric, and nitric acids, as also some compounds with platinum. Adenin was found to be extremely resistant to feebly oxidizing agents, but on the other hand to be easily acted upon by reducing agents. The substances which are produced by these means were not very well characterized from a chemical point of view. The speaker however thinks that, owing to the ease with which it can be reduced, adenin plays an extremely important part in the physiological action of the nucleus. When adenin is reduced in presence of oxygen, a brownish-black substance is obtained, which appears to be identical with the azocuminic acid which is produced when hydrocyanic acid is exposed to the air for a long time. In conclusion, Prof. Kossel pointed out that adenin makes its appearance in large quantities under certain pathological conditions, and that he has succeeded in detecting it in the urine of persons suffering from leuchæmia. —Dr. Rawitz gave an account of his investigations on mucous cells in Invertebrates. He has found in the mantle of mussels goblet-cells, of which some are small with a large central nucleus and granular protoplasm; others are large with a small central nucleus, the rest of the cell-contents being uniform in appearance; and others again are large, with a small nucleus situated at the base of the cell, the protoplasm having oily granules scattered throughout itself. This last kind of cell allows the oily granules and mucous contents to pass out at the apex of the cell into the surrounding water. A careful investigation has shown that the above three different kinds of cells are merely different stages in the secretory activity of the mucous cells, and that during this activity the cell-contents not only undergo a change of minute structure, but also of chemical composition, the latter being evidenced by the changed reactions which they give with staining agents. During secretion the cell itself is not broken down, but only a portion of its protoplasm is excreted, in the form of oily drops and mucous threads, the nucleus remaining intact. Dr. Rawitz considers that special importance must be assigned to the nucleus in connection with the nutrition of the cell, as during the secretory activity of the cell it undergoes changes not only in its shape, but in its behaviour towards staining reagents.

STOCKHOLM.

Royal Academy of Sciences, November 9.—Plantæ vasculares Yenessenses inter Krasnojarsk urbem et ostium Yenisei fluminis tractenus lectæ, by Dr. N. J. Scheutz.—On additive characters of diluted solutions of salts, by Dr. S. Arrhenius.—On the theory of the unipolar induction, by Dr. A. Rosén.—Some formulæ of electrodynamics, by the same.—The phænogamous plants of Bergjum, enumerated in the sequence of their inflorescence, by the Rev. B. Högrell.—On hyalotekit from Långbau, by G. Lindström, Assist. Min. Cab. State Mas.—On the scientific results of the expedition of the *Vega*, by Baron Nordenskiöld.—Contributions to the theory of the undulatory movement in a gaseous medium, by Prof. A. V. Bäcklund.—Contributions to the knowledge of the exterior morphology of the Acridioideæ, especially with respect to the specimens found in Scandinavia, by Dr. B. Haij.—Generalization of the functions of Bernouilli, by Dr. A. F. Berger.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

Les Ancêtres de Nos Animaux: A. Gaudry (Baillière et Fils).—British Journal Photographic Almanac, 1888 (Greenwood).—The Elements of Chemistry: Ira Remsen (Macmillan).—British Discomycetes: W. Phillips (Kegan Paul).—Vaccination Vindicated: J. C. McVail (Cassell).—Flower Land, an Easy Introduction to Botany: Rev. R. Fisher (Heywood).—A Course of Quantitative Analysis: W. N. Hartley (Macmillan).—Teneriffe and its Six Satellites, 2 vols.: O. M. Stone (Marcus Ward).—Annual Report on the Working of the Registration and Inspection of Mines and Mining Machinery Act during the year 1886 (Melbourne)—Digging, Squatting, and Pioneering Life: Mrs. D. D. Daly (Low).—China; its Social, Political, and Religious Life: from the French of G. Eug. Simon (Low).—Through the West Indies: Mrs. G. Layard (Low).—A Text-book of Paper Making: Cross and Bevan (Spon).—Proceedings of the Linnean Society of New South Wales, vol. ii part 2.—Quarterly Journal of the Geological Society, vol. xliii. pt. 4, No. 172 (Longmans).—Annals of Botany, vol. i. No. 11 (Clarendon Press).

CONTENTS.